



# Ed-Fi Certification

Indiana Department of Education  
May 16, 2018

# Welcome

Ed-Fi Vendor Certification



**DOUBLE LINE** -- Private Presentation ONLY --

# Agenda

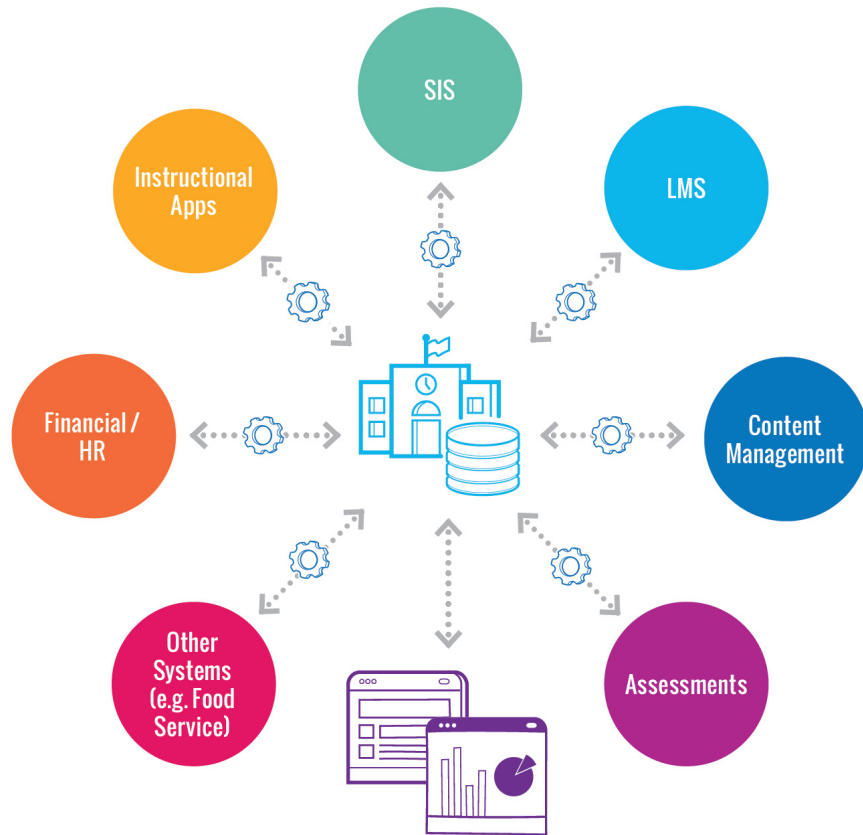
- Introduction to Ed-Fi
- Ed-Fi Certification Resources
- Ed-Fi Certification Process & Benefits
- Q & A



# Introduction to Ed-Fi



# What is Ed-Fi?



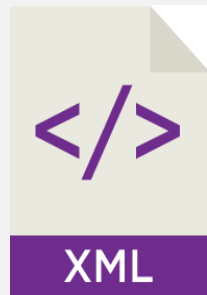
Ed-Fi is designed to smoothly and securely connect multiple educational data systems.

# Ed-Fi Standards Components

## IMPLEMENTATION

### REST API Specifications

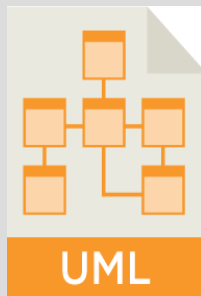
- Deal with specific use cases
- Defined in Open API and normative guidelines
- Data modeled in JSON



### XML (Bulk) Specifications

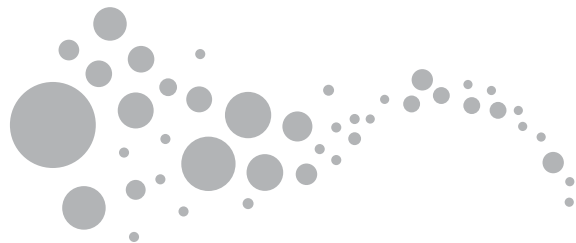
- Deal with specific use cases
- Defined in XSD
- Data in transit is in XML

## FOUNDATION

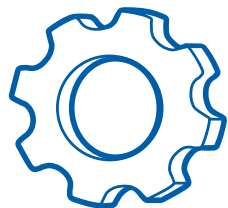


### Ed-Fi Unifying Data Model

- A logical model in UML and a Data Handbook
- The foundation of all Ed-Fi technical standards
- Ensures that all standards are compatible



Ed-Fi ODS  
API



Ed-Fi  
Operational  
Data Store



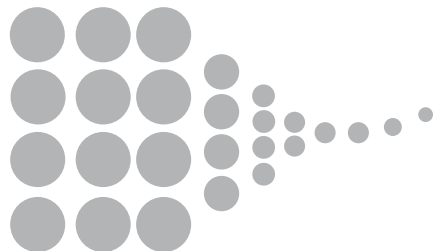
Ed-Fi Dashboards



Data  
Warehouse

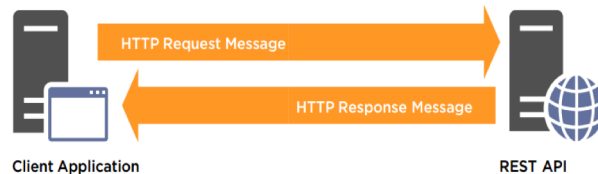


Reports/  
Analytics



# Ed-Fi API Specifications

- Define Application Programming Interfaces (API) for movement of data
- Follow REST(ful) conventions:
  - HTTP(S) using verbs GET, POST, PUT, DELETE
- Two-Legged OAuth security for client credentials



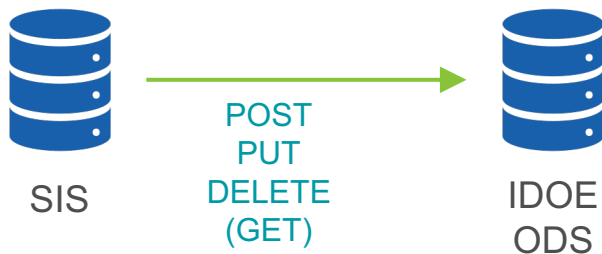
GET /sections

```
{
  "schoolId":12345,
  "classPeriodName":"4th Period",
  "classroomIdentificationCode":"abcde",
  "localCourseCode":"Math 101",
  "termTypeId":1,
  "schoolYear":2012,
  "uniqueSectionCode":"3FJ56",
  "sequenceOfCourse":1,
  "availableCredit":1.5
}
```

# API Configurations – Use Cases

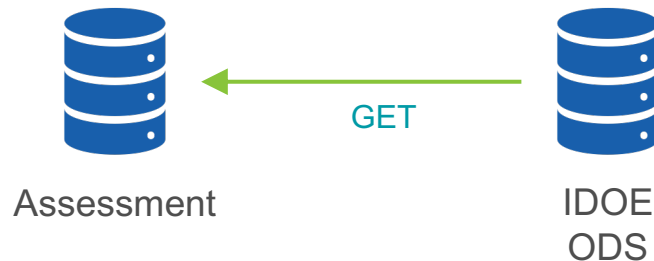
## Data Collections API

- Vendor system integrates with the ODS / API
- Vendor system is responsible for synchronizing



## Data Access API

- Vendor system calls the ODS / API





# Vendor Certification Resources

# Ed-Fi Vendor Certification Information



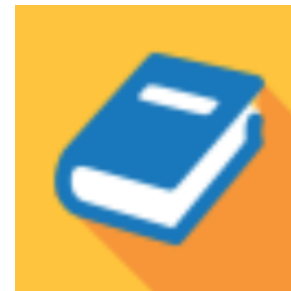
[techdocs.ed-fi.org/display/EDFICERT](https://techdocs.ed-fi.org/display/EDFICERT)

- Details on Certification Process
- Ed-Fi Alliance Contact Information
- Resource Scenarios

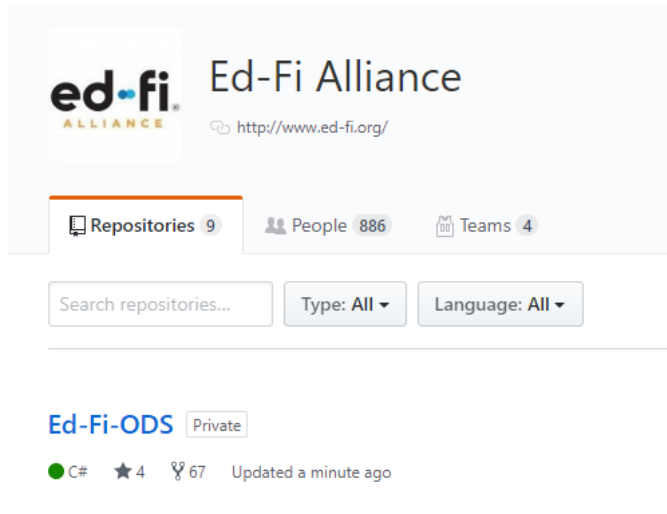
# Ed-Fi Technical Documentation

[techdocs.ed-fi.org](https://techdocs.ed-fi.org)

- Ed-Fi Data Standard
- Ed-Fi Implementation Suite
- Ed-Fi Tech Community
- How to Articles
- Download Links



# GitHub – Source Code for ODS / API



[github.com/Ed-Fi-Alliance/Ed-Fi-ODS](https://github.com/Ed-Fi-Alliance/Ed-Fi-ODS)  
[github.com/Ed-Fi-Alliance/Ed-Fi-ODS-Implementation](https://github.com/Ed-Fi-Alliance/Ed-Fi-ODS-Implementation)  
[github.com/Ed-Fi-Alliance/Ed-Fi-Common](https://github.com/Ed-Fi-Alliance/Ed-Fi-Common)

- Source Code for ODS / API
- Three Repositories:
  - Ed-Fi ODS
  - Ed-Fi ODS Implementation
  - Ed-Fi Common
- GitHub Account & Ed-Fi License Required

# Swagger – Interactive REST API Documentation

## students

This entity represents an individual for whom instruction, services, and/or care are provided in an early childhood, elementary, or secondary educational program under the jurisdiction of a school, education agency or other institution or program. A student is a person who has been enrolled in a school or other educational institution.

GET	/students	Retrieves resources based with paging capabilities (using the "Get All" pattern).
GET	/students	Retrieves resources matching values of an example resource (using the "Get By Example" pattern).
GET	/students	Retrieves a specific resource using the values of the resource's natural key (using the "Get By Key" pattern).
POST	/students	Creates or updates resources based on the natural key values of the supplied resource.
DELETE	/students/{id}	Deletes an existing resource using the resource identifier.
GET	/students/{id}	Retrieves a specific resource using the resource's identifier (using the "Get By Id" pattern).
PUT	/students/{id}	Updates or creates a resource based on the resource identifier.

[techdocs.ed-fi.org/display/ODSAPI23/Using+the+Online+Documentation](https://techdocs.ed-fi.org/display/ODSAPI23/Using+the+Online+Documentation)

# Swagger – Interactive REST API Documentation

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GET	/students	Retrieves resources based with paging capabilities (using the "Get All" pattern).
<b>Implementation Notes</b> This GET operation provides access to resources using the "Get All" pattern. In this version of the API there is support for paging.		
<b>Response Class (Status 200)</b> The matching resource(s) were successfully retrieved. If no instances are found will return an empty collection.		
Model	Example Value	
<b>student {</b> <b>id</b> (string): The unique identifier of the resource., <b>studentUniqueId</b> (string): A unique alphanumeric code assigned to a student., <b>personalTitlePrefix</b> (string, optional): A prefix used to denote the title, degree, position, or seniority of the person., <b>firstName</b> (string): A name given to an individual at birth, baptism, or during another naming ceremony, or through legal change., <b>middleName</b> (string, optional): A secondary name given to an individual at birth, baptism, or during another naming ceremony., <b>lastSurname</b> (string): The name borne in common by members of a family., <b>generationCodeSuffix</b> (string, optional): An appendage, if any, used to denote an individual's generation in his family (e.g., Jr., Sr., III)., <b>maidenName</b> (string, optional): The person's maiden name., <b>sexType</b> (string): A person's gender., <b>birthDate</b> (date-time): The month, day, and year on which an individual was born., <b>birthCity</b> (string, optional): The set of elements that capture relevant data regarding a person's birth, including birth date and place of birth., <b>birthStateAbbreviationType</b> (string, optional): The abbreviation for the name of the state (within the United States) or extra-state jurisdiction in which an individual was born., <b>dateEnteredUS</b> (date-time, optional): For students born outside of the U.S., the date the student entered the U.S., <b>multipleBirthStatus</b> (boolean, optional): Indicator of whether the student was born with other siblings (i.e., twins, triplets, etc.), <b>profileThumbnail</b> (string, optional): ProfileThumbnail <b>}</b>		

# Swagger – Interactive REST API Documentation

[Try it out!](#) [Hide Response](#)

**Curl**

```
curl -X GET --header 'Accept: application/json' --header 'Authorization: Bearer d2be8525965b4d679b22a240831b3578' 'https://api-sta
```

**Request URL**

```
https://api-stage.ed-fi.org/api/api/v2.0/2017/students
```

**Response Body**

```
[
  {
    "id": "1322c606d644497b8548207933921855",
    "studentUniqueId": "605704",
    "personalTitlePrefix": "Mrs",
    "firstName": "Shelby",
    "middleName": "Ruby",
    "lastName": "Barajas",
    "sexType": "Female",
    "birthDate": "2005-12-15T00:00:00",
    "hispanicLatinoEthnicity": true,
    "oldEthnicityType": "American Indian Or Alaskan Native",
    "loginId": "sbarajas",
    "addresses": [
      {
        "addressType": "Temporary",
        "streetNumberName": "654 Mission Hills",
        "city": "Grand Bend",
        "stateAbbreviationType": "TX",
        "postalCode": "78834",

```

**Response Code**

```
200
```



# API Client Developers' Guide

[techdocs.ed-fi.org/display/ODSAPI23/API+Client+Developers%27+Guide](https://techdocs.ed-fi.org/display/ODSAPI23/API+Client+Developers%27+Guide)

- For Applications to Interact with Ed-Fi ODS / API
- Client SDKs
- Authentication / Authorization
- Sandbox Admin Portal

## API Client Developers' Guide Contents

Find out more about how to develop client applications for an Ed-Fi ODS / API v2.3 platform:

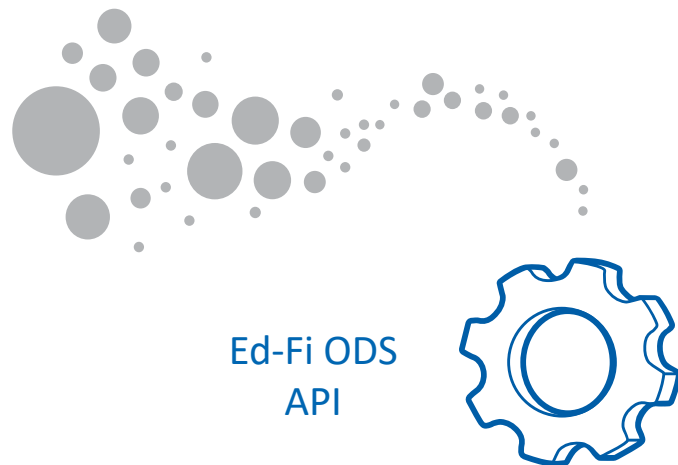
- [Introduction](#)
- [Basics](#)
- [Authentication](#)
- [Authorization](#)
- [Using Code Generation to Create an SDK](#)
- [Using the Online Documentation](#)
- [Using the Sandbox Administration Portal](#)
- [More Information](#)

# Ed-Fi Vendor Certification

## Process Overview



# Ed-Fi Certification for SIS Vendors



- SIS for ODS API v2 (transactional data)

# Certification Process Overview

1. API Requirements and Documentation
2. Develop REST API Integration
3. Run Test Cases
4. Certification with Ed-Fi Alliance

# API Requirements & Documentation



## ed-fi ODS/API Documentation

The Ed-Fi ODS/API is divided into several areas by function.

### Resources

Resources are the primary entities that most API client applications work with on a regular basis. Students, staff, education organizations, and their related entities are maintained using this area of the API.

[Resources](#)

### Composites

Composites are read-only combinations of resources that address specific business use cases. Using composites reduces the number of calls that an API client application must make to retrieve resources for these use cases.

[Assessment](#)

[Enrollment](#)

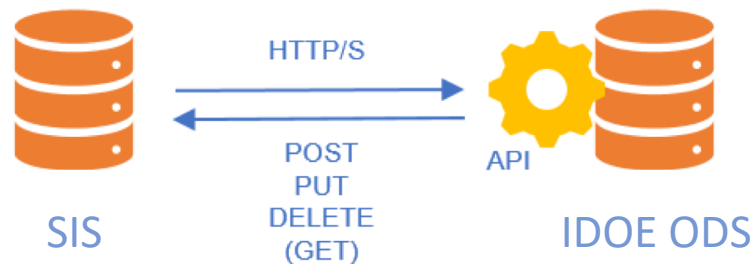
For example, the Enrollment composite can return all the students in a given class section or all students associated with a particular staff member, and similar student association-related information in a single call. Similarly, the Assessment composite can return all assessments associated with a school, or all assessments associated with a student in a single call. Platform hosts may add their own composite resources.

- [apidocs.ed-fi.org](https://apidocs.ed-fi.org) or Swagger
- Online Resources
- Ed-Fi Community




# REST API Integration for Data Exchange

- Download and Install ODS API Source Code
- Working in Sandbox Test Environment
- Test the various operations for each Resource



# Run Test Cases

 The Student Enrollment interchange describes student enrollments in schools and in sections. Below each required operation is the Ed-Fi ODS / API Resource exercised.

1. Add a graduation plan

- GraduationPlan

2. Enroll a student in a high school

- StudentSchoolAssociation
- StudentSchoolAssociationGraduationPlan

3. Enroll a student in a high school second semester

- StudentSchoolAssociation
- StudentSchoolAssociationGraduationPlan

[techdocs.ed-fi.org/display/EDFICERT](https://techdocs.ed-fi.org/display/EDFICERT)

>> Available Certifications >> Student Information Systems

# Schedule & Complete Certification



- Schedule Certification via Ed-Fi Alliance
- Online testing of Scenarios
  - 2-Hour Blocks, 2 to 3 Times a Week
  - Up to 4 Weeks
- Certification Lasts One Year

# Benefits of Certification

- Data Integration: Measure Twice, Cut Once
- Seamless Mapping of Data Sets
- Certified Ed-Fi Vendor on Ed-Fi.org website

# Certified SIS Vendors Include:

**Follett Aspen™**



PowerSchool



*Infinite*  *Campus*



# Questions?



# THANK YOU

